

We claim:

1. A method for communicating in a time-domain wavelength interleaved network having a hub node, comprising:  
5 transmitting substantially all communications through said hub node.
2. The method of claim 1, further comprising the step of synchronizing a transmission and reception of a message such that a message sent in a time-slot  $k$  by a node  $N_i$  is received by a node  $N_j$  in said time-slot  $k$ .  
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3. The method of claim 1, wherein said synchronizing step is performed by said hub node.
4. The method of claim 1, wherein said hub node imposes a timing reference.  
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5. The method of claim 1, wherein said hub node recovers from a link failure by shifting transmission times of nodes separated from said hub node by said failed link.
6. A method for communicating performed by an interior node in a time-domain wavelength interleaved network having a hub node, comprising:  
20 sending substantially all communications received from said hub node having a wavelength indicating said communication is destined for another node on all branches outward from said hub node.
- 25 7. The method of claim 6, further comprising the step of synchronizing a transmission and reception of a message such that a message sent in a time-slot  $k$  by a node  $N_i$  is received by a node  $N_j$  in said time-slot  $k$ .
8. The method of claim 7, wherein said synchronizing step is performed by  
30 said hub node.

9. A node in a time-domain wavelength interleaved network having a hub node, comprising:  
a tunable laser directed toward said hub node; and  
a wavelength dropper for dropping signals having a wavelength associated  
5 with said node only from a fiber coming from said hub node.
10. The node of claim 9, where a transmission and reception of a message are synchronized such that a message sent in a time-slot  $k$  by a node  $N_i$  is received by a node  $N_j$  in said time-slot  $k$ .
11. The node of claim 9, wherein said hub node imposes a timing reference.
12. The node of claim 9, wherein said hub node performs a time-slot scheduling without regard to a delay in said time-domain wavelength interleaved network.
13. The node of claim 9, wherein said hub node recovers from a link failure by shifting transmission times of nodes separated from said hub node by said failed link.
14. A time-domain wavelength interleaved network, comprising:  
a plurality of nodes, including a hub node, wherein substantially all  
20 communications in said time-domain wavelength interleaved network pass through said hub node.
15. The time-domain wavelength interleaved network of claim 14, where a transmission and reception of a message are synchronized such that a message sent in a time-slot  $k$  by a node  $N_i$  is received by a node  $N_j$  in said time-slot  $k$ .
16. The time-domain wavelength interleaved network of claim 14, wherein said hub node imposes a timing reference.
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17. The time-domain wavelength interleaved network of claim 14, wherein said hub node performs a time-slot scheduling without regard to a delay in said time-domain wavelength interleaved network.
- 5 18. The time-domain wavelength interleaved network of claim 14, wherein said hub node recovers from a link failure by shifting transmission times of nodes separated from said hub node by said failed link.
19. The time-domain wavelength interleaved network of claim 14, further  
10 comprising a plurality of said nodes interconnected in a tree configuration.
20. The time-domain wavelength interleaved network of claim 14, further comprising a plurality of trees of nodes, each of said trees having a hub node, each of said hub nodes interconnected in a ring configuration.